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ABSTRACT

Four studies by the Cognitive Strategy Instruction in Writing project at the Institute for Research on Teaching, Michigan State University, examined the acquisition of expository writing skills in fifth and sixth grade students. The first study examined the effects of teaching sixth grade students about comparison/contrast text structure. Results indicated that such instruction improved sixth grade students' text recall, summary organization, and appropriate use of key words and phrases. The second study (in which eight teachers and their students participated) introduced fifth and sixth grade students to the writing process with emphasis on: (1) audience and purpose; (2) the role of text structure knowledge in planning, drafting, and revising; and (3) audience, purpose, and text structure knowledge. This study presented students with "think-sheets" to prompt students through the writing process, and results indicated that students in these programs made significant gains in their free writing skills. The third study reported on the participation of an experienced fifth grade teacher in the previous studies, and noted that the teacher internalized the teaching strategies presented in the program. Finally, the fourth study involved an extensive descriptive examination of the writing curriculum used in special education classrooms and with special education students mainstreamed into regular classrooms. Based on the results of these studies, a revised expository writing program was developed. (Samples of students' writings and one figure are included, and sample planning, organizing, editing, and revising work sheets, one footnote and 49 references are appended.) (MM)

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CENTER FOR THE STUDY OF READING

A READING RESEARCH AND EDUCATION CENTER REPORT

Technical Report No. 421

ACQUISITION OF EXPOSITORY WRITING SKILLS

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Abstract

While there has been a great deal of research and review papers about the writing process, acquisition of written literacy, and instruction in writing, less attention has focused on the writing of expository texts. Researchers of the Cognitive Strategy Instruction in Writing project at the Institute for Research on Teaching, Michigan State University, have examined the acquisition of expository writing skills in upper elementary school students. The series of studies and their implications are discussed in this paper. First, research related to expository writing is presented: specifically, research related to the role of text structure instruction in expository writing, the role of the social context in which such instruction occurs, and the importance of collaborative efforts between teachers and researchers. Second, an instructional approach to expository writing is discussed. Third, using writing samples of upper elementary school students, the impact of instruction on students' knowledge about, performance in, and attitude toward writing is discussed.

ACQUISITION OF EXPOSITORY WRITING SKILLS

As children progress through their early years in school, they develop a wealth of knowledge about language, print, and relationships among language processes. However, when children reach the upper grades of elementary school where there is greater emphasis on content learning, their ability to progress in writing often declines (National Assessment of Educational Progress, 1986). One reason this happens may be because the children are not being taught how to read and learn from informational or content area texts, that is, from expository writing.

There are several reasons for this. First, expository writing has generally been the concern of the rhetoricians and high school English courses because most elementary schools provide basic teaching in reading, while English courses in middle and secondary schools focus on students' acquisition skills in expository writing. Second, what writing instruction there is in elementary schools has focused on creative writing. This was true in the past when activities such as story starters and daily writing on different topics were in vogue, as well as today when more sophisticated writing process activities are recommended to teachers. These latter programs do not ignore or dismiss expository writing, but neither do they provide specific support or instruction for it. Third, little information has been available to help define how expository writing should be taught. Fourth, good models of expository writing are typically not available to students in these grades. Social studies and science texts in the middle grades are often poorly organized and "inconsiderate" to their audience (Armbruster, 1984), and do not provide students with examples of effective expository writing. Thus, an elementary school teacher must be unusually confident about her knowledge of expository writing to teach it to her students.

Our research team at the Institute for Research on Teaching has been studying effective ways to teach upper elementary students expository writing and reading skills. We began with the recently developed idea to instruct students about different expository text structures (Anderson & Armbruster, 1984; Meyer, 1975). In this paper we first describe three areas of research that have influenced our approach: (a) the role of text structure instruction in expository comprehension and composition, (b) the role of the social context in which such instruction occurs, and (c) the importance of teacher/research collaboration in successful intervention programs. Next, we describe how we developed an instructional program to teach expository writing, linking it to reading. We then present the program. Finally, using students' writing samples and their responses to an interview, we show that the program affects students' knowledge about writing, their ability to present information in an organized manner, and their attitude toward writing.

Research Related to Improving Expository Writing/Reading

Our interest in improving students' ability to compose in an expository form grew out of our interest in improving their ability to comprehend such texts. In some early research on question-answer relationships (QAR), Raphael and her colleagues (Raphael & Pearson, 1985; Raphael & Wonnacott, 1985) studied elementary and middle school students' ability to use information from their background knowledge and from the expository texts they were reading to answer different types of comprehension questions. One of the most difficult type of question was text implicit, requiring students to "think and search." They had to integrate information from across a text, as well as read and learn from differently structured portions of the text. For example, one part of a text might compare/contrast the adventures of two explorers; another might define a problem explorers had and then describe their solution.

Integrating across text structures is quite difficult. Spivey (1984), who examined university students as they read more than one text and wrote summaries that required integrating information across texts, suggests that it is a problem even for mature, able readers. Less able college students had difficulty in selecting important information and integrating it.

One reason readers of all ages have difficulty in synthesizing or integrating information from expository texts may be that they lack awareness about the differences among text structures (Englert & Hiebert, 1984; McGee & Richgels, 1986; Taylor & Beach, 1984). Without this knowledge, they may not have successful "search strategies" to determine and to locate important information. It was this possibility that led us to consider text structure instruction as one means for enhancing students' comprehension of expository text, and eventually led us to consider student composition of expository text.

Text Structure Research

Different text structures exist (Meyer, 1975), although no single text contains only one structure (Schallert & Tierney, 1982), and they answer different types of questions (Anderson & Armbruster, 1984). Consider, for example, a comparison/contrast text structure and a problem/solution text structure. Texts using comparison/contrast structures answer essentially four questions: (a) What is being compared? (b) On what are they being compared? (c) How are they alike? (d) How are they different? The questions are addressed regardless of text format or order. Problem/solution texts consider a different set of questions: (a) What is the problem? (b) What caused the problem? (c) How was the problem solved? (d) What were the steps of the solution? Again, the actual format, or order of information presented, or the emphasis placed on each question may vary. Yet, problem/solution texts address some combination of these fundamental questions.

Teaching students about text structure has been found to improve both their comprehension and composition of stories and seems promising as a way to enhance their expository reading and writing abilities (Fitzgerald & Spiegel, 1983; Gordon & Braun, 1985; Singer & Donlan, 1982). Most of the story structure research has been based on the idea that as children's concepts of story and story structure are made clearer, they use that knowledge as they read to comprehend the major events in the story, and they use that knowledge in writing to determine appropriate information to include and to organize or sequence their story. For example, after Singer and Donlan (1982) taught high school students a set of story grammar-based questions to guide their reading, they could better comprehend complex stories. Gordon and Braun (1985) taught fifth grade students about elements of narration based on story grammar research by first giving them a series of questions to use when reading to identify information in texts with varying structures. Students were led through 15 lessons, learning to generate their own questions about stories and use similar questions in planning and composing their own narratives.

Most expository text structure research has concerned the relationship between knowledge of text structure and comprehension (Englert & Hiebert, 1984; McGee, 1982; Meyer, Brandt & Bluth, 1980; Taylor, 1980, 1982). It shows that students with a better understanding of text structures have higher comprehension scores (Armbruster & Anderson, 1980; Bartlett, 1980; Berkowitz, 1986; Taylor & Beach, 1984). For example, Berkowitz (1986) taught sixth grade students how to construct maps of important text information. Another group studied a teacher-produced map. These students' comprehension of the text was compared with students who reread the text and students who answered written text questions. Not surprisingly, students who constructed their own maps performed higher on the comprehension measures than those in other groups.

Expository text structure instruction can affect students' writing. Taylor and Beach (1984) studied the effects of a summary procedure that focused seventh grade students' attention on structural signals (e.g., headings and subheadings) used by content area text authors. They found that when students wrote on an assigned topic, they were better able to organize the information they wished to present. The authors suggest this ability contributed to an improvement in the overall quality of their writing. While these findings do not address the improvement in students' ability to produce texts when the topic is not assigned, it provides evidence that text structure instruction has a positive impact on students' expository writing.

In our research we evaluated both reading comprehension and writing. We taught students how texts are structured, what questions different structures are designed to answer, and how understanding a text structure can help to locate and integrate important information. Our first study examined how an instructional program teaching expository text structure affects students' comprehension and writing. Our second study measured the impact of the instruction in a process writing classroom. The third was a case study of the process-writing teacher, and the last study extended the instructional work to younger and lower achieving students. Before describing this work, however, our guiding assumptions about teaching writing and working with teachers are explained.

Research on Process Writing Instruction

Teaching the process of writing (see Applebee, 1981; Graves, 1983; Murray, 1982) has triggered the interest of teachers and school personnel across the country. This research describes writing as a non-linear process; that is, it does not begin with simple tasks and work toward more complex tasks. Instead, it consists of a number of more holistic activities: prewriting, drafting, editing, revising, and eventual publication or sharing with an audience (Flower & Hayes, 1982). Throughout the process, writers are guided by a complex awareness of their purposes for writing, the subject about which they are writing, their intended audience, and the form that best conveys their paper's message or content (Britton, 1978; Kinneavy, 1971; Moffett, 1968). Further, the social context in which students engage in writing has a powerful impact on the type of writing they produce (DeFord, 1986). Key elements of successful writing instruction programs include writing for a real purpose and a real audience in a supportive environment that provides frequent, if not daily, opportunities for sustained writing (Calkins, 1983; Graves, 1983).

Following Vygotsky's and Bruner's theories of general language learning, teachers are to play a more supportive role in helping students learn how to write (Langer & Applebee, in press). As a socially-mediated process that develops over a long period of time and in interactions with a more mature learner, the teacher "scaffolds" learning by simplifying the task, clarifying its structure, relating sub-processes to the larger task at hand, and providing a framework of rules or procedures. The novice gradually internalizes these rules and procedures until instruction is no longer required (Wood, Bruner, & Ross, 1976; Vygotsky, 1962).

Wertsch's (1979) research on mother/child interactions conceptualizes this transfer of control from the mature learner to the novice. He identified four stages in the child's movement toward self-regulation. At first, the mother and child do not share the same perception of the task, and the mother must define it in terms the child will understand. This parallels the situation in which a teacher has a specific writing activity in mind (e.g., a report on animals), and the students do not have any concept of what must be accomplished. The teacher may set up a series of writing activities that together would help the students complete the assignment. At the second level, the child may understand the task (or the student may understand the writing assignment), but not be able to complete the task without explicit guidance on how to do so (e.g., receive a set of directions or steps from the teacher). At the third level, the child begins to see the significance of the task (e.g., writing a report to learn about a different culture), as well as the general rules of the situation, and is able to complete the task when given vague hints and suggestions. At the fourth stage, the child shifts to self-regulation and requires no assistance.

Unfortunately, many teachers today are at a distinct disadvantage when providing support of this nature to teach writing. Few have had any methods course in writing during their teacher training program and thus are often not comfortable defining writing activities. Few consider themselves to be writers, so they cannot assume the role of the "mature learner." The writing curriculum is often vague, and time allotted for writing tends to be minimal (Florio & Clark, 1982).

We aimed to create and test a writing program that could counteract these disadvantages. We provided (a) teachers and their students with a basic understanding of the components of writing, (b) methods for teaching students effective writing strategies for each component, and (c) suggestions for creating a purposeful writing environment, one that allowed teachers to define meaningful writing activities and students to feel comfortable sharing their papers with a real audience of peers and adults. A critical aspect to the success of such a change from current practice was teachers' willingness to change as well as to extend their expertise.

Teacher/Research Collaboration

Studies of teacher/researcher collaboration aided our search for procedures that would help teachers to support students in the writing process. Successful staff development programs involve long-term, interactive programs to which both teachers and researchers contribute (Barnes & Putnam, 1981). Just as research on instruction in writing assumes that learning to write is socially mediated, research on staff development also assumes that teachers' learning is socially mediated and that control should be transferred from the staff developer to the teacher. This led us to design a program to help teachers implement writing through levels of transfer similar to those described by Wertsch (1979) regarding children's learning, leading to the final stage when teachers take over and begin to transfer control to students (Schiffert, 1978; Swanson-Owen, 1985).

The long-term goal of our research was to develop a collaborative, supportive, interactive program to change teachers' thinking, that allows teachers to see instruction as appropriate, and that gives them ownership of their learning and freedom to internalize instruction (Day, 1985) so they could guide students in developing their own writing. A second goal was to provide students, through their participation in the program, with a range of appropriate and useful strategies to successfully engage in all aspects of writing.

Research on the Expository Writing Program

In this section, we discuss studies conducted at the Institute for Research on Teaching, based upon research in text structures, process writing, and models of successful collaboration.[1] We draw most heavily on a short-term training study focusing on expository text comprehension (Raphael & Kirschner, 1985) and on a long-term instructional study, focusing primarily on composition of expository text (Raphael, Englert, & Kirschner, 1986; Raphael, Kirschner, & Englert, 1986a).

STUDY #1. Raphael and Kirschner (1985) examined the effects of teaching students about comparison/contrast text structure. Students had 7 hours of instruction spread over 6 weeks. In the first lesson, students were introduced to the concept of comparison/contrast by discussing a hypothetical situation in which they had been given permission from their parents to buy a puppy so they went to the pet store where they found two puppies. They considered questions they might want to ask the pet store owner about the two animals. In this way, they were led to consider both the text structure concept, comparison/contrast, and the role questions play in considering information to include when writing about it. The next two lessons focused on brief comparison/contrast passages which students read and examined in terms of (a) what was being compared, (b) on what, (c) similarities, and (4) differences. In later lessons students reviewed the concept of a text structure, learned how to summarize information, and were introduced to key words and phrases used to signal text structures. Students then practiced writing summaries of increasingly longer passages that used a comparison/contrast structure.

Results indicated that such instruction did improve sixth grade students' text recall, their summaries of text were better organized and had more relevant information, and they used key words and phrases more appropriately. Unfortunately, although these students' compositions were longer and better organized, they lacked "voice," were not interesting, and would *not* be the type of papers we wanted to encourage children to produce. This was not surprising as the students had not

participated in activities designed to create a sense of authorship: They were writing (a) for the researchers, not themselves or peers, (b) for evaluation, not learning or publication, (c) first drafts only, not as part of a writing process, and (d) with no sense of ownership. We concluded that to improve both comprehension and composition of students' writing, our instruction in text structures should stress the writing process, particularly *purpose* and *audience*.

STUDY #2. To test the conclusion from the first study we extended the text structure instructional research of Raphael and Kirschner (1985) within process-writing classrooms. Work was approached in a long-term collaborative effort in which instruction occurred as part of the ongoing curriculum, and teachers and researchers together determined the specifics of implementation. Eight teachers and their fifth- and sixth-grade students participated in the study, forming four different experimental groups. All teachers had a minimum of 12 years of teaching experience with at least 20 hours of graduate coursework, and were considered by researchers and administrators to have good classroom skills. One experimental group, the *Social Context* group, was introduced to the writing process with emphasis on audience and purpose. Students participated in peer-editing sessions, author's chair (Graves & Hansen, 1983), and published class books. The second, *Text Structure* group, was introduced to the writing process with emphasis on the role that text structure knowledge plays during planning, drafting, and revising. These two groups continued the activity for 6 months. The third group of students had two instructions (*Social Context/Text Structure*). Students learned about the writing process and the role of purpose and audience for 3 months and for the next 3 months they studied text structure and the role it plays in planning, drafting, and revising. The fourth group of students served as controls by participating in a traditional writing program driven by the curriculum in their language arts textbook.

Fundamental to the three instructional groups (excluding the fourth, the control group) were a series of think-sheets which had been modified after being used successfully with adult beginning writers as part of an undergraduate composition course (Kirschner & Yates, 1983). Each think-sheet consisted of a set of prompts that encouraged students to use strategies appropriate to the aspect of the writing process in which they were engaged. The think-sheets served as guides for the subprocesses used during composition, making "visible" the types of questions that guide authors as they write. One think-sheet was developed to guide each phase of writing: thinking during planning, drafting, reflecting on the first draft and preparing to edit it, revising, and second/final drafts. The actual think-sheets used varied according to the experimental condition (see Figure 1).

[Insert Figure 1 about here.]

The think-sheets, with procedures for using them and specific structures to teach, have been modified based on the findings of this and subsequent studies. In the next section of the paper, we present the modified version of the procedure in more complete detail. In this section, we describe the procedures specific to this second study.

Teachers in all three experimental conditions used the think-sheets to introduce students to the different aspects of the writing process (planning, drafting, editing, revising), and students used them as reminders or prompts during their participation. Initially, teachers followed procedures established and modeled by the researchers. As they internalized an understanding of the knowledge, tasks, and procedures of teaching writing, they assumed increasing responsibilities for implementing the program in their respective classrooms.

Teachers established different tasks for students based on the instructional condition they were assigned. Those in the Social Context group used versions of think-sheets that did not refer to text structure, the questions the text should answer, or organizational features. Each student wrote a non-fiction narrative, an explanation, and two comparison/contrast and problem/solution papers during the fall quarter. Specific topics were based on students' personal experiences and background knowledge. In the winter and spring, they repeated writing one of each of these structures, focusing

on social studies related topics. They never received explicit instruction in the questions or key words and phrases but did, however, learn about and participate in planning, drafting, peer editing and group sharing sessions, revising, and publishing.

Teachers in the Text Structure group had students practice writing a non-fiction narrative and an explanation paper, and two comparison/contrast and problem/solution papers, based on personal experiences, over the fall quarter. In winter, the teachers displayed good examples of each structure and had students (a) identify the type of text represented, (b) explain how they were able to recognize the type, (c) identify key words and phrases that signalled the text type, and (d) list questions answered by the paper. Students were then given the papers they had written in the fall and asked to evaluate them in terms of text type, questions answered, and key words and phrases used. Next, students selected one paper to revise, focusing on information to add, rewrite, or delete, based on the questions their text should answer, and key words or phrases to signal the type of paper. The think-sheets used by this group focused on text structure in planning, drafting, and revising, with no emphasis placed on audience or purpose through peer-editing or publication. For the remainder of the year, students wrote one each non-fiction narrative, explanation, comparison/contrast, and problem/solution paper based on topics related to their social studies units.

Teachers in the Social Context/Text Structure group began with the same emphasis as those in the first: writing process with a focus on audience and purpose for writing. Throughout the fall they had students write six papers, participate in peer-editing, sharing, and publishing. In the winter quarter, however, students participated in the text structure lessons introduced to those in the second group and worked on publishing their own class social studies book. Audience and purpose were stressed throughout the year.

Results indicated that students in the three intervention programs made significant gains in their free writing, surpassing students who had been in the traditional language arts text-based program, (see Raphael, Englert, & Kirschner, 1986). Furthermore, students receiving instruction in text structure made specific gains in their ability to write comparison/contrast texts, a type of text that has been shown to be particularly difficult (Englert & Hiebert, 1984) for students, especially in generating similarities and differences on parallel traits.

On measures of near and far transfer to reading (a summarizing activity and a free recall measure), the results were less clear. Students in the two "pure" groups--Text Structure and Social Context--performed better than the students in the combined program of Social Context/Text Structure. One possible reason for this is that teachers and their students in the Social Context/Structure group actually had two programs to implement in a single year. For students just beginning to master expository writing, the dual focus may have been confusing. Interviews with their teachers showed that they had just become comfortable with a rather complex new instructional approach and had started questioning the research team in ways that showed a great deal of insight into issues surrounding the teaching of writing. With the addition of the text structure program, the level of their questions suggested concern for "lower level" issues such as timelines or management. (See Kirschner, Raphael, & Englert, 1985, for a thorough treatment of the data.) This hypothesis received still further support from a follow-up case study of one of the teachers in the combined intervention group.

STUDY #3. A key question for instructional researchers should be: What remains of a program studied once the formal research has ended? The case study of the fifth grade teacher, Carol, in the combined intervention condition provided some relevant data (for a more thorough treatment, see Kirschner, in progress). Carol had taught in the public schools for 17 years and was approaching retirement. Initially, she had raised more concerns about implementation of the program than any of the other teachers. She asked more questions, seemed to rely more on the researchers and the materials provided, and to take longer to internalize the concepts and procedures. However, by the end of her involvement in the combined instruction, she voiced support of the program and indicated

that she had seen growth in her students' writing and reading. One of the most interesting comments she made was a casual remark that it was too bad she could not do the study over again now that she really understood what we were doing (i.e., had internalized the knowledge, tasks, and procedures).

The researcher conducting the case study, Becky Kirschner, documented Carol's participation during the formal part of the program through weekly observations, meetings, and informal discussions and over the summer and next academic year. The researcher documented with notes, interviews, and student writing samples the program Carol implemented once formal involvement in the study ended. During Study 2, the researchers had gradually transferred control of the program to the teachers. In the next year, Carol demonstrated how she had internalized the program goals. During the summer, Carol focused on adapting and modifying the program for the third grade to which she was moving. Becky interviewed her at that time and found that her rationale was based on: (a) gains her fifth-grade students had made in both reading and writing that she attributed to the writing program, (b) a belief that peer editing and publishing had given her fifth-grade students a purpose for writing and had helped them to develop a sense of audience, and (c) a belief that the writing program had helped to demystify text as students began to view reading from a writer's perspective.

Elements of the program that she retained included a focus on peer-editing and on writing for publication. In fact, instead of publishing two class books as she had in the previous year, the class published a book weekly for 10 weeks while she had a student teacher, then bi-weekly for the remainder of the year. Further, she expanded the students' audience by involving parents, other classrooms, and other teachers. A second element, text structure instruction, was modified substantially by introducing the four text structures--narrative, explanation, comparison/contrast, problem/solution--as she introduced students to the writing process. Other modifications included gradually allotting more time to writing than in previous years. Finally, a sign that she had internalized the strategies involved in teaching writing came when she abandoned the use of the think-sheets, saying that she was comfortable modeling each strategy and phase of writing for the students using writing samples and thinking aloud as she wrote (on an overhead projector) or responded to their papers.

STUDY #4. The purpose of Study 4 was to extend the research on children with special needs. This study involved an extensive descriptive examination of the writing curriculum currently used in special education classrooms and with special education students mainstreamed into regular education classrooms, and it is actually the first in a 3-year line of studies. We are now examining the effects of a combined text structure/audience--focused approach on students' expository composition and comprehension. However, the interesting issue is not whether teachers can duplicate a program we design and can examine its impact on average students. Rather, we are interested in *how* teachers implement the program and modify it to suit the individual needs of their classroom and their students. Further, we are focusing on adaptations for younger, low-achieving, and mildly handicapped (LD) students who are mainstreamed and in special education settings.

Data currently being analyzed includes narrative observations of each of 16 teachers (eight regular and eight special education) classrooms. They were observed during a morning and an afternoon, during two writing lessons, and during a content area writing activity. Each teacher was also interviewed about her knowledge and beliefs about writing, current writing curriculum, and personal writing habits. Student data includes think-aloud and interview data for a subset of 40 regular and 40 special education students, as well as writing, summary, and recall measures for all students. Informal analyses suggest that special education and low-achieving students experience difficulty sustaining their writing for more than a few lines of print, and further, they have difficulty assuming the informant status needed for expository writing (see Englert, Raphael, Anderson, Anthony, Fear, & Gregg, 1986). The interviews with teachers indicate a wide range of writing activity from using traditional language arts texts to process writing with editing and publishing. However, all teachers perceived a weakness in their expository writing program (e.g., reports were seldom assigned for

content area or formal writing activities) and a lack of guidelines for implementing such instruction in a way consistent with the process writing focus.

Based on the two studies that have been completed and analyzed and the data available for initial analyses from our current research, we modified the program used in Study 2 to combine the text structure instruction with the establishment of a social context, stressing both simultaneously. A major component added to the program is a focus on dialogue, both inter- and intrapersonal. This program is currently being implemented by the 16 teachers from Study 4. Similar measures are being used to assess change in both teachers and students. The next study in this sequence focuses again on what is maintained in the year following formal involvement of the researchers. In the third year study, the teachers and a subset of their students will be observed and interviewed, and student writing samples will be gathered.

In the following section, we provide an overview of the instructional program that we are currently testing. This program again relies on the use of think-sheets as teacher and student tools, but does not separate instruction in writing from instruction in the questions different text structures consider. Instead, the two are combined into a single approach.

Revised Expository Writing Program

Based on findings from the four studies reported here, we are continuing to modify materials and adjust instructional strategies. This section presents a program that is not an "ideal" version, but rather, a "next step" in developing an effective instructional intervention for improving expository composition and comprehension. An important component of this version is dialogue: teacher/student, student/student, student/self. We first present the seven think-sheets that introduce the writing process and the guiding questions for each. We then discuss how think-sheets prompt teacher modeling and thinking aloud as they teach writing, encourage teacher/student dialogue about strategies appropriate to each phase, prompt appropriate student/student dialogue during peer-editing, and finally, encourage useful student/self dialogue as students write independently. (Sample think-sheets are presented in Appendix A.)

Think-sheet #1: Prewriting. The prewriting think-sheet focuses on four elements authors consider in planning a paper: subject, audience, purpose, and form. When writers begin a paper, they initially consider the topic about which they plan to write--focusing on information their readers need to know, what they, as authors, already know about the topic, what must be gathered from external sources, and what is particularly interesting about the topic to their readers. As they consider their topic, writers also must consider their audience, the amount of background knowledge that the audience may be expected to bring to the reading, and the characteristics of their readers (e.g., age, interests). Writers also must consider why they are writing their papers (excluding the option that "It is an assignment"). For example, if their topic is explorers of the New World, they may ask themselves whether they are writing to explain what voyages were like, or to tell an adventure story that took place during that era, or to draw a parallel between preparing for such a voyage and getting ready for a field trip, and so forth. Once writers have determined their topic, audience, and purpose, a form or structure is selected for optimally presenting the information. The think-sheet in Appendix A consists of a set of prompts to guide the reader to consider these factors before beginning the first draft.

Think-sheet #2: Organizing. The second think-sheet is actually a set of four different pattern guides designed to help the young writer to organize the information generated during planning, or the young reader to organize the information gathered during reading, into a format for the first draft. These pattern guides reflect the different questions each type of text is designed to answer, displaying both the questions and a visual representation of the paper's organization. Thus, they serve to facilitate recall, whether the information must be recalled from one's background knowledge, or from texts that have been read, by guiding the reader to select both important and relevant

information. See the Comparison/Contrast Pattern Guide in Appendix A. Additional guides are available for problem/solution, explanation, and narration text structures. Once students have considered the most appropriate text structure in which to present their information, they then select an appropriate pattern guide to help them organize the information they have and to generate additional information.

Think-sheet #3: First Draft. The third think-sheet is designed to allow students to compose a first draft of their paper. It consists of blank lines on a sheet of colored paper. Colored paper, rather than white lined paper, is used to remind students that their first writing attempt is not the final work. Writers are not usually thought to produce final copy on colored paper, thus the color serves to underscore that the paper is work in progress.

Think-sheet #4: Thinking about my First Draft. The focus of the fourth think-sheet is to prompt students to reflect on their first draft's strengths and weaknesses and to prepare for the editing session. This think-sheet simulates the thoughts a writer goes through when he or she has completed a draft (or several drafts) and is considering asking for external response to the draft. Authors may request a general response, but often are more specific, asking for feedback on particular sections of their paper. Thus, authors are asked to identify their favorite parts, list parts they would like to work on if they have more time, and list some questions they would like to ask their editors about their papers. The goal of this activity is to have students take ownership of their paper and to provide a focus for their editing.

Think-sheet #5: Editing. The fifth think-sheet guides the editing process. There are five versions of the editing think-sheet, one for each of the four text structures taught and a generic version (see Appendix A for sample of the comparison/contrast editing think-sheet). In all the versions, this think-sheet focuses on five specific types of responses. First, students are reminded to listen as the author reads his or her paper aloud, and second, they are asked what they thought the paper was mainly about. Third, students are asked to indicate a favorite part to the paper, and fourth, they are asked to think about ways the paper could be made clearer or more interesting. The text structure versions contain additional prompts asking if the author had presented answers to the questions appropriate to the structure. For example, the comparison/contrast version has students name what is being compared or contrasted, list the attributes for comparison, describe their similarities and differences, and locate the information in the paper.

Following prompts in the four areas mentioned, both author and editor are asked to discuss the editor's reactions. Prompts in each of these five areas gave students concrete guidance in appropriate ways to respond to written work. As a result, the author comes into the editing session with certain questions and so is ready for feedback. The reader/editor is pushed to consider specific responses, in contrast to more typical general responses such as "I like it," "It seems fine to me," or "Work on the middle."

Think-sheet #6: Revision. When authors receive feedback from readers, they may either choose to accept it in some form and respond, or they may choose to ignore it. The revision think-sheet is designed to promote authors' consideration of their editor's comments, while still giving them control of their own papers. Students are asked first to list all the suggestions made by their editor, to insure that they would at least acknowledge that suggestions were offered and then are asked to check those they plan to address. Following this decision-making, they are directed to plan revisions that would make their paper more interesting or easier to follow.

Think-sheet #7: Final Draft. After revisions are made on the draft version, students move to a final copy (or a next draft) think-sheet. The final draft think-sheet uses the same format as the first draft, except that it is printed on white paper. Students may move from revision to final draft, or may choose to write a second draft on colored paper before moving toward final copy.

Teachers' role in teaching the process. The role of the teacher in writing instruction in this program is based on the Vygotskian notion that learning is socially-mediated (Gavelek, 1986; Rogoff, 1986). The acquisition of a cognitive process such as expository writing is socially-mediated as it first occurs on an interpersonal plane, that is, between the teacher and students. The teacher, through modeling and thinking aloud, conveys to the students meaningful activities during the different aspects of writing (e.g., Raphael, Kirschner, & Englert, 1986b). The think-sheets serve the purpose of guiding the teacher to model and think aloud about specific appropriate strategies (e.g., during planning, thinking aloud about the audience, considering different purposes related to the identified audiences, debating about topics). They further serve to encourage the development of a shared vocabulary between teacher and students so that students have the language with which to discuss writing and to analyze their writing problems.

Initially, the teachers may carry out monologues, rather than dialogues with their students, as they model these strategies and the language to describe them. In effect, this level is comparable to Wertsch's (1979) description of mother/child interactions as the child moves toward self-regulation. At this point, the students and teacher may not share the same perception of the task of writing, and the teacher's role is to define and clarify the task for the students. The think-sheets provide a structure or guide of strategies to model and language to use when explaining different aspects of writing. At this level, they help to clarify the task of writing for both teacher and students.

As a shared understanding of the task of writing is established and a shared vocabulary is created with which to discuss writing, students and teacher begin a period of shared dialogue and joint responsibility, with the teachers monitoring the children's understanding of the writing process and of activities and strategies in which to engage. This point is comparable to Wertsch's (1979) second level in which students can complete the activities, but only when they are given the support or explicit guidance to do so. The teacher's role at this level is to help students to consider the think-sheets in terms of the writing process, and as external reminders of appropriate strategies or activities.

As the students move toward the third level in developing self-regulation, the teacher can begin to transfer responsibility of much of the process to the students, maintaining a role of an assistant who provides more general hints and reminders. A part of this shared responsibility and gradual transfer of control occurs during the peer-editing sessions. This session is designed to give teachers an opportunity to monitor students' relatively independent writing. Eventually, students begin to work independently of their teacher as they internalize the questions on the think-sheet and take ownership of the writing process themselves. As they internalize this process and the questions/prompts appropriate to different phases--moving to the fourth level, or self-regulation--students will no longer need external support, either from the think-sheets or from the teacher. Instead, they will plan, draft, ask for feedback, and revise to achieve their own writing goals.

Impact of Program Participation

Our goal has been to extend students' awareness of different types of writing, as well as their ability to produce and comprehend different expository texts. Nontheless, we want to be sure that a program this intense will not have a negative effect on students' sense of writing as communication or on their willingness to produce meaningful papers. In this last section, we use data selected from our research to illustrate the potential impact of such a program on students' knowledge about writing, their ability to present information in an organized manner, and their attitude toward writing.

Students' knowledge about writing. A set of students randomly selected from each instructional group in Study 2 were interviewed. One of the questions we asked was, "What do you do when you write a paper?" The following responses illustrate differences in their knowledge about the writing process and how such knowledge was influenced by the program in which they were involved.

Keith was a student in the *Text Structure* instruction group which emphasized a set of writing strategies. His response to our question was:

> If you want to do a compare/contrast, you got to tell what you are comparing it with, and contrasting about. See what would go first, second, put them in a certain order. See if there is any misspelled words or something and try to fix it up, if there is something you have to add or take away, then you put that on a different piece of paper and then you'd go into (the) final draft. (If a friend were writing a story) I would tell him where does this take place, what is this about, and who is it about, and what came first, second, and third. Gather information if he has to, then he would write it down for his first draft, then check for misspelled words and take stuff out and add stuff, then go onto final draft.

Note that Keith recognizes the complexity of the writing process, and mentions specifically the questions authors consider as they write their papers. He suggests specific strategies, though very basic ones, for revision, including adding certain kinds of information or deleting others, and gathering information if all questions are not answered. He shows a concern for copy-editing in his remark about misspelled words. However, he shows no awareness of audience.

In contrast, Jenny was a student who received instruction in the *Social Process* group, which emphasized audience and purpose. Her response reflects an awareness of the many activities to writing a single paper, as well as a focus on the role of audience in terms of editors. However, she does not seem to have any specific strategies. She responded:

> First you write down what kinds of things you're going to be doing, and you just get all your ideas out on the page. And then you try to make the first draft and you get as much stuff in as you can. Then, what we are doing in our class is, we check them over with editors. They read your paper and they say, well this doesn't sound right and maybe you should try to change this to so and so. Before that I start thinking about my first draft, and then . . . do (the) editorial. Then you just do a revision form where you decide what things you want to change, and then you put it all together in a final copy.

Note that she sees an important role for her reader/editor prior to completing the paper, though she maintains ownership of her paper by stating that during revision the author decides what should be changed.

Dawn participated in the combined program, and, not surprisingly, displays knowledge of the complexity of the writing process, as well as attention to the central role of the type of paper being written. Notice that she qualifies her answer according to whether she is writing expository (comparison/contrast) or narration (a story). She responds:

> (To write a compare/contrast), I would look at two people, find their alike and different points. Like if I was comparing my friend Stacy and my friend Tracy, I would say that Tracy is shorter than Stacy or Tracy has real dark hair and Stacy has a little light hair. (If I didn't know them), I'd have to go to the library and do some research on them. I sit down and write the first draft. Before that I do brainstorming, . . . like if I was doing George Washington and Abraham Lincoln I'd have to write (about) both Presidents . . . no full sentences, only words. Before our first draft we do prewriting and preplanning. (Interviewer asks, What is that?) Prewriting is like in compare and contrast, who or what is being compared on? What are they being compared on? How are they alike and how are they different? (Interviewer asks: Then the first draft?) Yeah, then we get these sheets with a friend, and we write, what do you think your editor said about your paper? What

> will you do to change the things with your editor suggestions? Your editor reads your story, and on the pink sheet they tell you what you should do to get it in better shape for your final draft or what you should take out. And what you should put in. (And then?) If it was published, my family would be reading it and my friends.

Dawn shows sophisticated knowledge of different strategies for different types of writing, identifying the difference between using personal knowledge and situations in which external information sources must be used. She comments on the need to include comparisons or contrasts on parallel traits in comparison/contrast texts. Further, she indicates a sense of audience beyond the teacher, including both her friends and family. Finally, she includes specific strategies in terms of gathering information to answer questions, and adding and deleting information.

Terry participated in the traditional language arts textbook based curriculum. His response shows a mechanistic view of writing. When the interviewer initially asked what he did when he wrote, he looked confused. The interview prompted, "like when you write to compare or contrast something." He responded, "I never heard of it." The interviewer then prompted, "like in writing a story." He responded:

> When I write a story this is how I first start off, write the title and then write the beginning of it. First step I do is write the major story. And then I go all the way through and stop at periods and when I ask a question I write a question mark. And if it's exciting, I put an exclamation mark. Put a period (at the end).

These students' responses indicate, not unexpectedly, that "what you teach is what you get." They provide further support for considering combining generalized instruction in the process of writing, with instruction in specific strategies for composing expository texts. The importance of creating an environment in which students share their writing can be seen as an important contribution to their development of a sense of audience.

Students' Ability to Write Text and Convey Information

Students were asked both in the fall and in the spring to write a paper comparing and contrasting two people, places, or things. The focus of the directions was on including important and interesting information, with the audience designated as students' "best friend." The two papers that follow were written by two students. The author of the first paper, Matthew, had not received any instruction in text structures.

> Mcdonalds is a big place it even has a playground for the kids. That's probably why the kids gobble up their food and run outside. The father gets up grab the kid by the hair and says were are you going? He say swallow your food. So theirs a point that Mcdonald is a good place for the kids. Well the only thing I like is the bag mac and the strawberry shake. The other place I'm comparing is burgerking. Burgerking is a place that has the whopper. That's what I like.
>
> The end

Matthew intended his paper to compare/contrast the two restaurants, but did not signal his reader very effectively. In fact, the paper began as a discussion of McDonalds, using a narrative structure to describe the effect of the playground at McDonalds on children's and fathers' behavior. The restaurant itself was barely described. Even when Matthew introduced the second restaurant, he did not clearly describe it in terms of parallel attributes. He attempted to do so, describing his favorite food--Big Mac and strawberry shake versus Whopper--in both restaurants, but the reader is left to make the connection.

In contrast, the second paper was written by David, a student who had received instruction in text structures. He also chose to compare/contrast the two fast food restaurants.

> I am going to compare and contrast Burger King and McDonalds. The first thing I'm going to compare/contrast them on is there service. These two restaurants are similar in many ways. One is the checkers are very nice. They always say have a nice day. But there also different. Burger King has propted (prompter) service. It takes them about a minute to get my food ready but at Mcdonalds it took them 30 minutes to get my food ready. The second thing I'm going to compare and contrast them on is there food selection. There selection is alike in many ways. One is they both have breakfast, lunch, dinner selection and they both have a wide selection but Burger King has a wider selection than Mcdonalds.

Notice that both papers maintain a sense of "voice," are approximately the same length, and are approximately equally well written mechanically. However, there is a marked contrast to the one produced by the student who had received instruction in text structures. He clearly lets his audience know that this is a paper that compares and contrasts the two fast food restaurants. He uses parallel traits on which to compare them, yet clearly makes his preference and implied recommendations known. All these features are lacking in the first paper. One impact of the text structure instruction clearly lies in improving students' ability to organize and convey information.

Students' Attitude Toward Writing

How does participating in the program affect students' attitude toward writing? One area of concern about the impact of think-sheets is on students' writing of narratives from personal experience. It might be thought that the think-sheets could reduce spontaneity or lead to stilted, uninteresting text. Robin's paper written in early fall before she began the program, follows.

> I wish I went into the hunted house. The way Tammy describe it, it must of been fun. Speicely when you walk. When they said (here comes some more meat) that is when I ran out. When I hear screams it ges me scared. Why did you all the suden get scared?
>
> P.S. Please write back.

Notice that she showed a sense of audience in her question to her reader (why did you all of a sudden get scared?) and in her request to have her friend write back, but she did not provide much context for the reader, nor any closure.

Her posttest paper is in marked contrast. Not only has she included greater detail, she has set a context, provided insight into the characters involved, and maintained her "voice." It is important to note that she knew that other students would not be reading this paper, that her only audience was the researcher (i.e., "the grown-up who had been helping in her class"). She wrote about a very personal experience, yet still followed the narrative structure, and included key words that signal time sequence throughout.

> When I was little my dad would come home with a box of donuts. He would only give them to me and I couldn't share with my brothers. One day I gave them both one. My dad saw me and give me a wippen and put me up in my room. The next day he didn't geve me some donuts. I felt like he didn't love me. When I was 2 years old my dad told me and my mom that he was to good for us. When he went out the door I thought he was going to come back. I waited near the door a lot. I never seen him again. When I turned 3 years old I moved out of that house. Now I

am 11 years old I still go by that house looking for him. But there is no hope.
One day I said to my self, I am going to look for him when I get older.

I don't know if he is alive. All the other kids make front of me when I am at school.
They don't under stand what my problem is.

I know there are alot of kids without a father.

It seems like he taught me how not to share.

That is why I act kind of strange.

Now everytime I eat a donut I think of him.

Robin's paper clearly demonstrates that using think-sheets to guide the writing process, stressing purpose and audience, does not inhibit students' ability to write about personal experience in a meaningful and moving way.

A second area of concern is whether or not the instructional program inhibits students' desire to write. When the year ended, all students were given a questionnaire to complete, asking them about strategies they used during writing. At the end of his questionnaire, Freddy, a low-achieving sixth grade student, wrote the following unsolicited note. This illustrates what was perhaps the most important change as a result of the program:

To Dr. R.--

I don't like to write but when you came along I begane to write I thank you four helping me to starte liking to writing.

from your best friend
Frederick Thank you!

Teaching expository writing requires a substantial commitment on the part of the elementary school teacher, and exploring ways to improve this instruction requires a similar commitment on the part of the researchers. While still in its developmental stages as a field of inquiry, initial research suggests that such instruction, if conducted within an environment that encourages writing for real purposes and for real audiences, can have a positive impact on students, their teachers, and the researchers who are able to share in the process.

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Footnote

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Figure Caption

Figure 1. Think-Sheets to Guide the Writing Process.

Think-Sheets to Guide the Writing Process

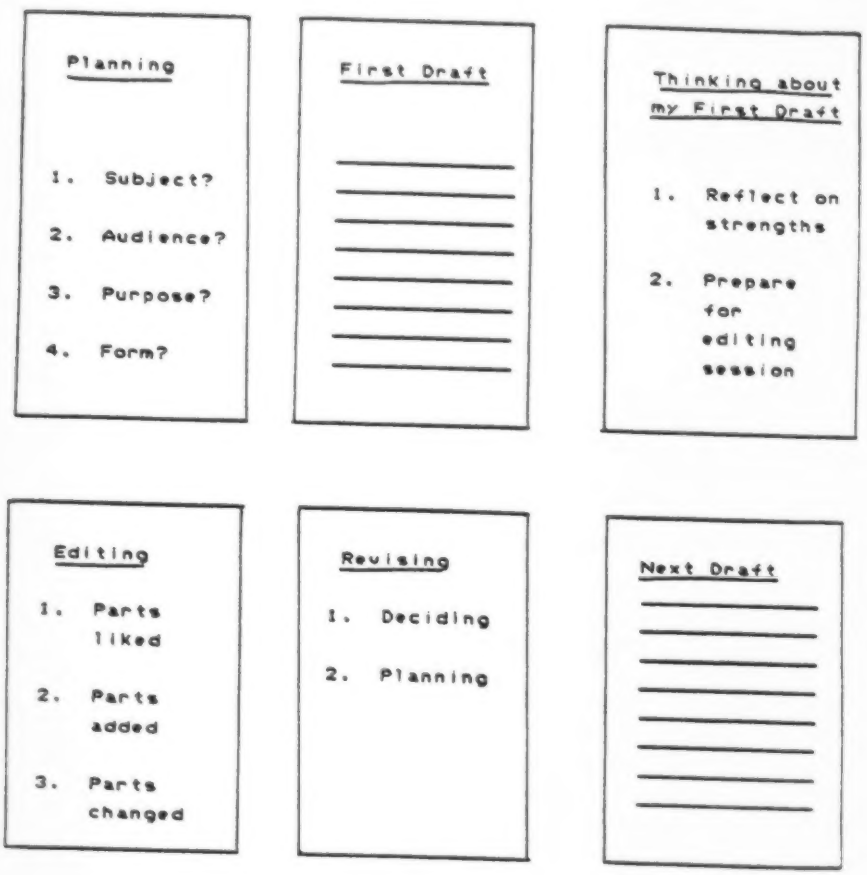

Figure 1

Appendix A

PLANNING

Author's name _____ Date _____

TOPIC: _____

WHO: Who am I writing for?

WHY: Why am I writing this?

WHAT: What do I already know about my topic? (Brainstorm)

1. _____
2. _____
3. _____
4. _____

HOW: How do I group my ideas?

_____ _____

_____ _____

_____ _____

_____ _____

Thinking about My First Draft

Comparison/Contrast

Author's Name _____

Read to Check Information

What is my paper mainly about?

What do I like best? Put a * next to the best part and explain why.

What parts are not clear? Put a ? next to the unclear parts, and tell why they are not clear.

Is the paper interesting? Tell why or why not here:

Question Yourself to Check Organization Did I:

Tell what two things are compared and contrasted?	YES	sort of	NO
Tell things they are being compared and contrasted on?	YES	sort of	NO
Tell how they are alike?	YES	sort of	NO
Tell how they are different?	YES	sort of	NO
Use keywords clearly?	YES	sort of	NO

Plan for Editing Conference

What parts do I want to change? (For anything marked "Sort of" or "NO," add to, take out, reorder?)

1. _____

2. _____

What questions do I want to ask my editor?

1. _____

2. _____

ORGANIZING:
COMPARISON/CONTRAST

What is being compared/contrasted?

On What?

Alike?

Different?

On What?

Alike?

Different?

On What?

Alike?

Different?

EDITOR: Comparison/Contrast

Author's Name _____ Editor's Name _____

Read to Check Information

What is the paper mainly about?

What do you like best? Put a * next to the part you liked best and tell why you like it here:

What parts are not clear? Put a ? next to the unclear parts, and tell what made the part unclear to you:

Is the paper interesting? Tell why or why not here:

Question Yourself to Check Organization Did the author:

Tell what two things are compared and contrasted?	YES	sort of	NO
Tell things they are being compared and contrasted on?	YES	sort of	NO
Tell how they are alike?	YES	sort of	NO
Tell how they are different?	YES	sort of	NO
Use keywords clearly?	YES	sort of	NO

Plan Revision

What two parts do you think should be changed or revised? (For anything marked "Sort of" or "NO," should the author add to, take out, reorder?)

1. _____

_____

2. _____

_____

What could help make the paper more interesting?

TALK: Talk to the author of the paper. Talk about your comments on this Editor Thinksheet. Share ideas for revising the paper.

REVISION

Author's Name _____

Suggestions from my Editor

List all the suggestions your editor has given you:

a. _____

b. _____

c. _____

d. _____

e. _____

Decide on the Suggestions to Use

Put a * next to all the suggestions that you will use in revising your paper.

Making Your Paper More Interesting

List ideas for making your paper more interesting to your reader.

_____

_____

_____

Return to Your First Draft

On your first draft, make all changes that you think will improve your paper. Use ideas from your list above, and ideas for making the paper more interesting.